

DATA VALIDATION REPORT
VENEZIA - NAZARETH TRUCKING TERMINAL
SITE INVESTIGATION
LOWER NAZARETH TOWNSHIP, NORTHAMPTON COUNTY, PA
EARTH DATA NE, INC.
ACCUTEST LABORATORIES SDGs: JA38847, JA38981, and JA39099

This validation report presents the findings of a quality assurance review of the analytical data reported in the referenced sample delivery groups (SDGs). The soil, sediment, and aqueous samples and associated quality control (QC) samples were collected at the Venezia - Nazareth Trucking Terminal Site on 28 and 29 January 2010 and 1 and 2 February 2010 and submitted to Accutest Laboratories of Dayton, New Jersey. The sample specific analyses included volatile organic compounds (VOCs), semivolatile organic compounds (SVOCs), polychlorinated biphenyls (PCBs), and metals. Analysis of the VOC and SVOC fractions included a mass spectral library search for additional non-target compounds which were reported as Tentatively Identified Compounds (TICs). The analyses were performed in accordance with the following protocols: *Test Methods for Evaluating Solid Waste, United States Environmental Protection Agency (USEPA) SW-846, Third Edition, November 1986 and its updates*. Specific method references are as follows:

<u>Analysis</u>	<u>Method References</u>
VOCs	USEPA SW-846 Method 8260B
SVOCs	USEPA SW-846 Method 8270C
PCBs	USEPA SW-846 Method 8082
Metals	USEPA SW-846 Methods 6010B, 7470A, and 7471A

Validation of the organic compound data was performed in accordance with the USEPA *Region III Innovative Approaches to Data Validation, June 1995, Level M1* and USEPA *Region III Modifications to National Functional Guidelines for Organic Data Review Multi-Media, Multi-Concentration* (1994). Validation of the inorganic data was performed in accordance with the USEPA *Region III Innovative Approaches to Data Validation, June 1995, Level IM1* and USEPA *Region III Modifications to the Laboratory Data Validation Functional Guidelines for Evaluating Inorganics Analyses* (1993).

The samples included in the referenced Accutest SDGs are as follows:

Soil Samples

SB-2	SB-7	SB-12
SB-3	SB-8	SB-13
SB-4	SB-9	SB-14
SB-5	SB-10	SB-15
SB-6	SB-11	

Sediment Samples

MANHOLE 1 SED MANHOLE 2 SED

Aqueous Sample

WW TANK

QC Samples

TRIP BLANK - 01/29/10, TRIP BLANK - 02/02/10,
and TRIP BLANK - 02/02/10

EQUIP BLANK 02/01/10 (Equipment Blank)

MANHOLE 1 DUP-SED (Field Duplicate Sample)

ORGANIC DATA

The findings presented in this report are based on a USEPA Region III Level M1 review of the organic data for all samples. The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain-of-custody documentation; holding times; laboratory, equipment, and trip blank analyses; the qualitative identification of target compounds; and field duplicate precision.

The organic analyses were performed acceptably, but require qualifying statements. It is recommended that the analytical results be used only with the qualifying statements presented in this report. Any aspects of the data that are not qualified in this review should be considered quantitatively and qualitatively valid as reported. Data summary tables presenting the validated and qualified results are presented in Attachment 1 of this report. The TIC concentrations for similar compound classes have been reported as a total concentration in these data tables.

ORGANIC DATA QUALIFIERS

- All compounds that were qualitatively identified at concentrations below their respective reporting limits have been marked with "J" qualifiers to indicate that they are quantitative estimates.
- All TIC results have been qualified "J" to indicate that they are estimated values. The TICs that were assigned with tentative chemical identifications have also been flagged "N".

Any TIC considered to be a laboratory artifact or contaminant has been negated.
Any volatile compound initially reported as an SVOC TIC has been removed

from the SVOC TIC summary. Similarly, any semivolatile compound initially reported as a VOC TIC has been removed from the VOC TIC summary.

- Soil samples SB-2, SB-3, SB-4, SB-5, SB-6, and SB-7 were analyzed for VOCs with initial dilutions due to high concentrations of target and non-target compounds. These dilutions yielded elevated detection limits for these samples, and the elevated "non-detect" detection limits for the referenced soil samples should be noted when assessing the VOC results for the project.
- The sample results summarized in the following table were reported from a diluted reanalysis. These dilutions were required because the concentrations of the referenced compounds were beyond the linear calibration range of the instrument with the initial analysis. Positive results for these compounds were reported from the diluted reanalysis. All other results and detection limits for these samples were reported from the initial analysis.

Compounds Reported from a Diluted Reanalysis	Sample/Analytical Fraction
bis(2-Ethylhexyl)phthalate, 2-Methylnaphthalene, and Naphthalene	SB-2 and SB-5/SVOC Fraction
Benzene, Chloroform, cis-1,2-Dichloroethene, 4-Methyl-2-pentanone, and Trichloroethene	SB-3/VOC Fraction
2-Methylnaphthalene and Naphthalene	SB-4/SVOC Fraction
2-Methylnaphthalene	SB-6/SVOC Fraction
Fluoranthene and Phenanthrene	SB-12/SVOC Fraction
bis(2-Ethylhexyl)phthalate	Manhole 1 Sed and Manhole 1 Dup-Sed/SVOC Fraction

- Sample Manhole 1 Sed and its field duplicate sample, Manhole 1 Dup-Sed, were submitted to the laboratory to evaluate sampling and analytical precision for organic compounds. Field duplicate precision was assessed by comparison of the analytical results for these duplicate samples and calculation of the relative percent difference (RPD) between the positive analytical results. The field duplicate precision RPD criterion for all organic fractions was 40%. A control limit equal to 3X the reporting limit was used for field duplicate results at concentrations less than 5X the reporting limit.

The field duplicate precision objectives were met for all results reported for this duplicate pair, with the exception of the compounds presented in the following table. The poor precision observed for these compounds is attributed to the heterogeneity of the samples and/or instrument instability. The positive results for these compounds in samples Manhole 1 Sed and Manhole 1 Dup-Sed should be considered quantitative estimates and have been qualified "J" in the data tables.

Compounds Qualified for Field Duplicate Precision

Acenaphthene, Acenaphthylene, Anthracene, Benzo(a)anthracene, Benzo(a)pyrene, Benzo(b)fluoranthene, Benzo(g,h,i)perylene, Benzo(k)fluoranthene, Chrysene, bis(2-Ethylhexyl)phthalate, Fluoranthene, Fluorene, Indeno(1,2,3-cd)pyrene, Pyrene, and Aroclor 1254
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INORGANIC DATA

The findings presented in this report are based on a USEPA Region III Level IM1 review of the inorganic data for all samples. The review was based on an evaluation of the following criteria, reported according to the CLP-equivalent deliverables format: chain-of-custody documentation; holding times; field duplicate precision; equipment blank results; and QC summary forms for laboratory calibration blanks, laboratory preparation blanks, initial and continuing calibration standards, low-level check standards, Inductively Coupled Plasma (ICP) interference check standards, matrix spike recoveries and reproducibility, and laboratory control sample results.

The inorganic analyses were performed acceptably, but require qualifying statements. It is recommended that the analytical results be used only with the qualifying statements presented in this report. Any aspects of the data that are not qualified in this review should be considered quantitatively and qualitatively valid as reported. Data summary tables presenting the validated and qualified results are presented in Attachment 1 of this report.

INORGANIC DATA QUALIFIERS

- All positive results for analytes reported at concentrations below their respective reporting limits have been marked with "J" qualifiers to indicate that they are quantitative estimates.
- The positive result reported for mercury in sample SB-4 is considered qualitatively invalid since this analyte was also detected in an associated blank at a similar concentration. Positive sample results for this analyte are considered qualitatively invalid when they are detected at concentrations less than five times the level detected in the associated blanks. The affected sample result has been qualified "B" to indicate that this detection is qualitatively invalid based on the results from the associated blanks.
- The "non-detect" detection limits reported for antimony in samples SB-15 and Manhole 2 Sed and mercury and thallium in sample WW Tank should be considered estimated and potentially biased low due to negative readings reported in associated laboratory calibration blanks. The "non-detect" detection limits for the referenced analytes have been qualified "UL" to indicate that they are biased low quantitative estimates. The possibility of elevated detection limits should be noted when assessing the "non-detect" results for the referenced analytes.
- The analytes summarized in the following table had low recoveries with associated low-level check standards. These low recoveries are an indication of a low bias with the measurement of these analytes at low concentrations. The positive results or "non-detect" detection limits for these analytes in the affected samples have been qualified "L" or "UL", respectively, to indicate that they are

biased low estimates. The possibility of elevated detection limits should be noted when assessing the "non-detect" values for the referenced sample results.

Analytes Qualified for Low-Level Check Standard Recoveries	Affected Samples
Selenium	SB-8, SB-9, SB-10, SB-11, and WW Tank
Lead	WW Tank

- The "non-detect" detection limits for the analytes summarized in the following table were reported from a diluted reanalysis. These dilutions were required because of high concentrations of matrix interference with the initial analysis. These dilutions yielded elevated detection limits for these analytes, and these elevated "non-detect" detection limits should be noted when assessing the referenced sample results.

Analytes with Elevated Detection Limits	Affected Samples
Antimony, Cadmium, Selenium, Silver, and Thallium	SB-3 and SB-4
Silver and Thallium	SB-5
Antimony, Selenium, and Thallium	SB-8 and SB-10
Antimony, Cadmium, Selenium, and Thallium	SB-9 and SB-11
Thallium	SB-14 and Manhole 2 Sed
Selenium and Thallium	Manhole 1 Sed and Manhole 1 Dup-Sed

- Sample Manhole 1 Sed and its field duplicate sample, Manhole 1 Dup-Sed, were submitted to the laboratory to evaluate sampling and analytical precision for metals. Field duplicate precision was assessed by comparison of the analytical results for these duplicate samples and calculation of the relative percent difference (RPD) between the positive analytical results. The field duplicate precision RPD criterion for all metals was 40%. A control limit equal to 3X the reporting limit was used for field duplicate results at concentrations less than 5X the reporting limit.

The field duplicate precision objectives were met for all results reported for this duplicate pair, with the exception of vanadium. The poor precision observed for vanadium is attributed to the heterogeneity of the samples and/or instrument instability, and the positive results for this analyte in samples SB-15, Manhole 1 Sed, Manhole 1 Dup-Sed, and Manhole 2 Sed were marked with "J" qualifiers on the data tables to indicate that they are quantitative estimates.

SUMMARY

In general, the analyses were performed acceptably, but required qualifying statements. This data validation report has identified the aspects of the analytical data that have required qualification. A support documentation package further detailing these findings has been prepared and is filed with the Venezia project file.



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6 April 2010

Dated

Attachment 1
Data Summary Tables

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION: DATE COLLECTED: MATRIX:	SB-2 01/28/10 Soil	SB-3 01/29/10 Soil	SB-4 01/29/10 Soil	SB-5 01/29/10 Soil	SB-6 01/29/10 Soil					
Volatile Organic Compounds (µg/Kg)										
Acetone	260	U	76.5	320	U	320	U	250	U	
Benzene	1020		482	850		570		38	U	
Bromodichloromethane	30	U	0.27	U	37	U	37	U	29	U
Bromoform	18	U	0.16	U	22	U	22	U	17	U
Bromomethane	47	U	0.42	U	58	U	58	U	45	U
2-Butanone (MEK)	230	U	2.1	U	280	U	280	U	220	U
Carbon disulfide	36	U	5.4		65.7	J	44	U	34	U
Carbon tetrachloride	65	U	0.58	U	79	U	1020		62	U
Chlorobenzene	242	J	17.5		152	J	64.1	J	74.9	J
Chloroethane	120	U	1.0	U	140	U	140	U	110	U
Chloroform	524	J	410	J	1150		2990		36	U
Chloromethane	19	U	0.17	U	24	U	24	U	19	U
Dibromochloromethane	13	U	0.11	U	16	U	16	U	12	U
1,1-Dichloroethane	16	U	0.60	J	20	U	20	U	16	U
1,2-Dichloroethane	41	U	0.36	U	49	U	49	U	39	U
1,1-Dichloroethene	78	U	6.4		94	U	94	U	74	U
cis-1,2-Dichloroethene	1050		14600		1350		1970		738	
trans-1,2-Dichloroethene	53	U	140		64	U	64	U	50	U
1,2-Dichloroethene (total)	1050		14700		1350		1970		738	
1,2-Dichloropropane	15	U	0.14	U	19	U	19	U	15	U
cis-1,3-Dichloropropene	16	U	0.14	U	19	U	19	U	15	U
trans-1,3-Dichloropropene	11	U	0.10	U	14	U	14	U	11	U
Ethylbenzene	230		11.4		281		232		154	
2-Hexanone	110	U	1.0	U	140	U	140	U	110	U
4-Methyl-2-pentanone(MIBK)	95	U	175	J	187	J	120	U	91	U
Methylene chloride	233	J	28.8		32	U	32	U	25	U
Styrene	116	J	0.11	U	15	U	15	U	12	U
1,1,2,2-Tetrachloroethane	34	U	0.31	U	42	U	42	U	33	U
Tetrachloroethene	112	J	1.4	J	73.4	J	39.0	J	50.2	J
Toluene	666		22.4		536		106	J	33	U
1,1,1-Trichloroethane	15	U	0.13	U	18	U	18	U	14	U
1,1,2-Trichloroethane	22	U	0.19	U	26	U	26	U	21	U
Trichloroethene	5030		1800		2300		3270		4660	
Vinyl chloride	21	U	1.0	J	25	U	25	U	20	U
Xylene (total)	1470		114		2020		2060		753	
Tentatively Identified Volatile Organic Compounds (µg/Kg)										
Total Unknowns	70000	J		72000	J	17000	J	97000	J	
Total Alkanes	53000	J		220000	J	28000	J	230000	J	
Total Substituted Aromatics	140000	J	88	J	250000	J	37000	J	82000	J
Dichlorofluoromethane			29	JN						
1,3,5-Trimethylbenzene			13	JN						
1,2,4-Trimethylbenzene			39	JN			6500	JN		

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION: DATE COLLECTED: MATRIX:	SB-2 01/28/10 Soil	SB-3 01/29/10 Soil	SB-4 01/29/10 Soil	SB-5 01/29/10 Soil	SB-6 01/29/10 Soil	
Semivolatile Organic Compounds (µg/Kg)						
2-Chlorophenol	35	U	35	U	35	U
4-Chloro-3-methyl phenol	34	U	35	U	35	U
2,4-Dichlorophenol	55	U	56	U	56	U
2,4-Dimethylphenol	58	U	59	U	58	U
2,4-Dinitrophenol	42	U	43	U	42	U
4,6-Dinitro-o-cresol	42	U	43	U	42	U
2-Methylphenol	39	U	40	U	39	U
3&4-Methylphenol	43	U	44	U	44	U
2-Nitrophenol	36	U	37	U	37	U
4-Nitrophenol	58	U	59	U	58	U
Pentachlorophenol	59	U	60	U	59	U
Phenol	36	U	37	U	36	U
2,4,5-Trichlorophenol	40	U	41	U	40	U
2,4,6-Trichlorophenol	32	U	33	U	33	U
Acenaphthene	9.9	U	10	U	10	U
Acenaphthylene	11	U	11	U	11	U
Anthracene	85.8		12	U	88.1	
Benzo(a)anthracene	51.3		11	U	56.6	
Benzo(a)pyrene	31.1	J	11	U	33.9	J
Benzo(b)fluoranthene	47.2		12	U	49.5	
Benzo(g,h,i)perylene	29.1	J	13	U	32.7	J
Benzo(k)fluoranthene	37.9		13	U	40.0	
4-Bromophenyl phenyl ether	12	U	13	U	13	U
Butyl benzyl phthalate	53.2	J	20	U	47.4	J
2-Chloronaphthalene	11	U	11	U	11	U
4-Chloroaniline	11	U	11	U	11	U
Carbazole	40.6	J	16	U	39.3	J
Chrysene	67.7		12	U	68.9	
bis(2-Chloroethoxy)methane	14	U	14	U	14	U
bis(2-Chloroethyl)ether	10	U	11	U	10	U
bis(2-Chloroisopropyl)ether	10	U	10	U	10	U
4-Chlorophenyl phenyl ether	10	U	11	U	10	U
1,2-Dichlorobenzene	72.0		10	U	10	U
1,3-Dichlorobenzene	9.2	U	9.4	U	9.3	U
1,4-Dichlorobenzene	7.6	U	7.8	U	7.7	U
2,4-Dinitrotoluene	15	U	15	U	15	U
2,6-Dinitrotoluene	13	U	13	U	13	U
3,3'-Dichlorobenzidine	8.7	U	8.9	U	8.8	U
Dibenzo(a,h)anthracene	12	U	12	U	12	U
Dibenzofuran	365		10	U	467	
					749	
					149	

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-2 01/28/10 Soil	SB-3 01/29/10 Soil	SB-4 01/29/10 Soil	SB-5 01/29/10 Soil	SB-6 01/29/10 Soil					
Semivolatile Organic Compounds (µg/Kg) (continued)										
Di-n-butyl phthalate	94.9	7.8	U	61.7	J					
Di-n-octyl phthalate	17	U	17	U	68.3	J				
Diethyl phthalate	12	U	12	U	12	U				
Dimethyl phthalate	12	U	12	U	12	U				
bis(2-Ethylhexyl)phthalate	4830	31	U	3280	89.9	35.7	J			
Fluoranthene	260	15	U	257	16	U	17	U		
Fluorene	571	11	U	630	11	U	12	U		
Hexachlorobenzene	11	U	11	U	11	U	11	U		
Hexachlorobutadiene	9.5	U	9.7	U	9.6	U	9.4	U	9.5	U
Hexachlorocyclopentadiene	35	U	36	U	35	U	34	U	35	U
Hexachloroethane	9.5	U	9.7	U	9.6	U	9.4	U	9.5	U
Indeno(1,2,3-cd)pyrene	24.1	J	12	U	28.2	J	23.1	J	12	U
Isophorone	9.2	U	9.4	U	9.3	U	9.1	U	9.2	U
2-Methylnaphthalene	25800	46.3	J	33900	44000		6260			
2-Nitroaniline	15	U	15	U	15	U	15	U	15	U
3-Nitroaniline	14	U	14	U	14	U	13	U	14	U
4-Nitroaniline	13	U	14	U	13	U	13	U	13	U
Naphthalene	7480	43.0		10700	13300		986			
Nitrobenzene	9.9	U	10	U	10	U	9.7	U	9.9	U
N-Nitroso-di-n-propylamine	8.4	U	8.5	U	8.4	U	8.2	U	8.3	U
N-Nitrosodiphenylamine	20	U	21	U	21	U	20	U	20	U
Phenanthrene	695	16	U	717	1140		327			
Pyrene	195	U	13	U	208		240		64.6	
1,2,4-Trichlorobenzene	9.1	U	9.3	U	9.2	U	9.0	U	9.1	U
Tentatively Identified Semivolatile Organic Compounds (µg/Kg)										
Total Unknowns	4900	J	300	J	7100	J	5800	J	3500	J
Total Alkanes	43000	J			290000	J	68000	J	39000	J
Total Substituted PAH	14000	J			19000	J	16000	J	11000	J
Total Substituted Phenols	11000	J								
Total Alkenes					13000	J	6700	J	1500	J
Total Organic Acids										
Total Cycloalkanes										
1-Methyl naphthalene										
Cyclic octaatomic sulfur										
Dibenzothiophene										
9,10-Anthracenedione										

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-2 01/28/10 Soil	SB-3 01/29/10 Soil	SB-4 01/29/10 Soil	SB-5 01/29/10 Soil	SB-6 01/29/10 Soil	
Polychlorinated Biphenyls (µg/Kg)						
Aroclor 1016	13	U	13	U	13	U
Aroclor 1221	23	U	24	U	23	U
Aroclor 1232	11	U	12	U	11	U
Aroclor 1242	13	U	13	U	12	U
Aroclor 1248	7.0	U	7.2	U	7.0	U
Aroclor 1254	8.9	U	9.1	U	44.7	
Aroclor 1260	14	U	14	U	14	U
Total Metals (mg/Kg)						
Aluminum	20500		15700		15000	
Antimony	2.3	U	4.9	U	4.7	U
Arsenic	8.6		34.6		24.5	
Barium	55.7		124		113	
Beryllium	0.84		1.2		0.92	
Cadmium	0.58	U	1.2	U	1.2	U
Calcium	1210		610	U	3590	
Chromium	16.7		16.8		21.7	
Cobalt	12.2		33.1		62.7	
Copper	32.2		35.3		37.0	
Iron	36900		81800		80800	
Lead	18.8		17.9		16.5	
Magnesium	1040		610	U	584	
Manganese	336		1990		2870	
Mercury	0.037	U	0.12		0.038	B
Nickel	24.3		37.8		53.6	
Potassium	1200	U	1200	U	1200	U
Selenium	2.3	U	4.9	U	4.7	U
Silver	0.58	U	1.2	U	1.2	U
Sodium	1200	U	1200	U	1200	U
Thallium	1.2	U	2.4	U	2.3	U
Vanadium	20.9		17.2		13.1	
Zinc	61.0		85.9		86.6	
					2.5	U
					16.5	
					435	
					79.0	

Qualifier Codes:

- U - This compound/analyte was not detected. The numerical value reported represents the sample detection limit for the compound/analyte.
- B - This result is qualitatively invalid because the compound/analyte was also detected in a blank at a similar concentration.
- J - This result should be considered a quantitative estimate.
- L - This positive result or detection limit should be considered a biased low quantitative estimate.
- N - The mass spectrum indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-7 01/29/10 Soil	SB-8 02/01/10 Soil	SB-9 02/01/10 Soil	SB-10 02/01/10 Soil	SB-11 02/01/10 Soil			
Volatile Organic Compounds (µg/Kg)								
Acetone	330	U	3.0	U	2.9	U	2.5	U
Benzene	50	U	0.46	U	0.45	U	0.45	U
Bromodichloromethane	38	U	0.35	U	0.34	U	0.34	U
Bromoform	22	U	0.20	U	0.20	U	0.20	U
Bromomethane	59	U	0.54	U	0.53	U	0.53	U
2-Butanone (MEK)	290	U	2.6	U	2.6	U	2.2	U
Carbon disulfide	107	J	0.41	U	0.40	U	0.40	U
Carbon tetrachloride	82	U	10.0		12.9		0.73	U
Chlorobenzene	50	U	0.46	U	0.45	U	0.45	U
Chloroethane	150	U	1.3	U	1.3	U	1.3	U
Chloroform	47	U	3.8	J	11.0		0.57	J
Chloromethane	24	U	0.22	U	0.22	U	0.22	U
Dibromochloromethane	16	U	0.15	U	0.14	U	0.14	U
1,1-Dichloroethane	20	U	0.19	U	0.18	U	0.18	U
1,2-Dichloroethane	51	U	0.46	U	0.45	U	0.45	U
1,1-Dichloroethene	97	U	0.89	U	0.87	U	0.87	U
cis-1,2-Dichloroethene	35	U	0.32	U	0.31	U	0.31	U
trans-1,2-Dichloroethene	66	U	0.60	U	0.59	U	0.59	U
1,2-Dichloroethene (total)	35	U	0.32	U	0.31	U	0.31	U
1,2-Dichloropropane	19	U	0.17	U	0.17	U	0.17	U
cis-1,3-Dichloropropene	20	U	0.18	U	0.17	U	0.18	U
trans-1,3-Dichloropropene	14	U	0.13	U	0.13	U	0.13	U
Ethylbenzene	149	J	0.50	U	0.49	U	0.49	U
2-Hexanone	140	U	1.3	U	1.3	U	1.3	U
4-Methyl-2-pentanone(MIBK)	120	U	1.1	U	1.1	U	1.1	U
Methylene chloride	33	U	0.30	U	0.29	U	0.29	U
Styrene	16	U	0.14	U	0.14	U	0.14	U
1,1,2,2-Tetrachloroethane	43	U	0.39	U	0.39	U	0.39	U
Tetrachloroethene	21	U	0.19	U	0.19	U	0.19	U
Toluene	82.4	J	0.39	U	0.38	U	0.38	U
1,1,1-Trichloroethane	19	U	0.17	U	0.17	U	0.17	U
1,1,2-Trichloroethane	27	U	0.25	U	0.24	U	0.24	U
Trichloroethene	77	U	0.71	U	0.69	U	0.69	U
Vinyl chloride	26	U	0.24	U	0.23	U	0.23	U
Xylene (total)	198	J	0.63	U	0.62	U	0.62	U
Tentatively Identified Volatile Organic Compounds (µg/Kg)		None Detected	None Detected	None Detected	None Detected			
Total Unknowns	7300	J						
Total Alkanes	3300	J						
Total Substituted Aromatics								
Dichlorofluoromethane								
1,3,5-Trimethylbenzene								
1,2,4-Trimethylbenzene								

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION: DATE COLLECTED: MATRIX:	SB-7 01/29/10 Soil	SB-8 02/01/10 Soil	SB-9 02/01/10 Soil	SB-10 02/01/10 Soil	SB-11 02/01/10 Soil
Semivolatile Organic Compounds (µg/Kg)					
2-Chlorophenol	36 U	36 U	38 U	38 U	36 U
4-Chloro-3-methyl phenol	35 U	36 U	37 U	37 U	36 U
2,4-Dichlorophenol	57 U	58 U	60 U	60 U	58 U
2,4-Dimethylphenol	60 U	60 U	63 U	63 U	61 U
2,4-Dinitrophenol	43 U	44 U	46 U	45 U	44 U
4,6-Dinitro-o-cresol	43 U	44 U	46 U	45 U	44 U
2-Methylphenol	40 U	41 U	43 U	42 U	41 U
3&4-Methylphenol	45 U	46 U	48 U	47 U	46 U
2-Nitrophenol	38 U	38 U	40 U	39 U	38 U
4-Nitrophenol	60 U	61 U	63 U	63 U	61 U
Pentachlorophenol	61 U	61 U	64 U	64 U	62 U
Phenol	37 U	38 U	39 U	39 U	38 U
2,4,5-Trichlorophenol	41 U	42 U	43 U	43 U	42 U
2,4,6-Trichlorophenol	33 U	34 U	35 U	35 U	34 U
Acenaphthene	70.0	10 U	11 U	11 U	10 U
Acenaphthylene	11 U	11 U	12 U	12 U	12 U
Anthracene	13.2 J	13 U	13 U	26.4 J	13 U
Benzo(a)anthracene	12 U	24.0 J	27.9 J	30.2 J	12 U
Benzo(a)pyrene	11 U	18.4 J	25.2 J	26.2 J	11 U
Benzo(b)fluoranthene	12 U	140	13 U	160	12 U
Benzo(g,h,i)perylene	13 U	43.8	354	86.3	13 U
Benzo(k)fluoranthene	13 U	18.3 J	14 U	30.6 J	14 U
4-Bromophenyl phenyl ether	13 U	13 U	14 U	14 U	13 U
Butyl benzyl phthalate	21 U	21 U	22 U	22 U	21 U
2-Chloronaphthalene	11 U	11 U	12 U	12 U	11 U
4-Chloroaniline	11 U	11 U	12 U	12 U	12 U
Carbazole	16 U	17 U	17 U	17 U	17 U
Chrysene	12 U	12 U	13 U	14.0 J	12 U
bis(2-Chloroethoxy)methane	14 U	14 U	15 U	15 U	15 U
bis(2-Chloroethyl)ether	11 U	11 U	11 U	11 U	11 U
bis(2-Chloroisopropyl)ether	11 U	11 U	11 U	11 U	11 U
4-Chlorophenyl phenyl ether	11 U	11 U	11 U	11 U	11 U
1,2-Dichlorobenzene	97.6	10 U	11 U	11 U	10 U
1,3-Dichlorobenzene	9.5 U	9.6 U	10 U	10 U	9.7 U
1,4-Dichlorobenzene	70.1 J	8.0 U	8.3 U	8.3 U	8.0 U
2,4-Dinitrotoluene	15 U	16 U	16 U	16 U	16 U
2,6-Dinitrotoluene	14 U	14 U	14 U	14 U	14 U
3,3'-Dichlorobenzidine	9.0 U	9.1 U	9.5 U	9.5 U	9.2 U
Dibenzo(a,h)anthracene	12 U	12 U	13 U	16.3 J	12 U
Dibenzofuran	124	11 U	11 U	11 U	11 U

Soil and Sediment Samples
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Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-7 01/29/10 Soil	SB-8 02/01/10 Soil	SB-9 02/01/10 Soil	SB-10 02/01/10 Soil	SB-11 02/01/10 Soil
Semivolatile Organic Compounds (µg/Kg) (continued)					
Di-n-butyl phthalate	329	8.0	U	8.3	U
Di-n-octyl phthalate	17	U	17	U	18
Diethyl phthalate	12	U	12	U	13
Dimethyl phthalate	12	U	13	U	13
bis(2-Ethylhexyl)phthalate	1890	32	U	33	U
Fluoranthene	22.0	J	39.9	36.9	J
Fluorene	188		12	U	12
Hexachlorobenzene	12	U	12	U	12
Hexachlorobutadiene	9.9	U	10	U	10
Hexachlorocyclopentadiene	36	U	37	U	38
Hexachloroethane	9.9	U	10	U	10
Indeno(1,2,3-cd)pyrene	12	U	26.5	J	13
Isophorone	9.5	U	9.6	U	10
2-Methylnaphthalene	2290		20	U	21
2-Nitroaniline	16	U	16	U	16
3-Nitroaniline	14	U	14	U	15
4-Nitroaniline	14	U	14	U	15
Naphthalene	661		9.8	U	10
Nitrobenzene	10	U	10	U	11
N-Nitroso-di-n-propylamine	8.6	U	8.8	U	9.1
N-Nitrosodiphenylamine	21	U	21	U	22
Phenanthrene	223		27.9	J	31.1
Pyrene	30.6	J	36.4		48.5
1,2,4-Trichlorobenzene	49.1	J	9.5	U	9.9
Tentatively Identified Semivolatile Organic Compounds (µg/Kg)					None Detected
Total Unknowns	4300	J	3100	J	280
Total Alkanes	15000	J			
Total Substituted PAH	5300	J			
Total Substituted Phenols	4600	J			
Total Alkenes					
Total Organic Acids			3000	J	170
Total Cycloalkanes					
1-Methyl naphthalene	1100	JN			
Cyclic octaatomic sulfur	1100	JN			
Dibenzothiophene					
9,10-Anthracenedione					

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-7 01/29/10 Soil	SB-8 02/01/10 Soil	SB-9 02/01/10 Soil	SB-10 02/01/10 Soil	SB-11 02/01/10 Soil	
Polychlorinated Biphenyls (µg/Kg)						
Aroclor 1016	13	U	13	U	14	U
Aroclor 1221	24	U	24	U	25	U
Aroclor 1232	12	U	12	U	12	U
Aroclor 1242	13	U	13	U	14	U
Aroclor 1248	7.2	U	7.3	U	7.6	U
Aroclor 1254	9.1	U	89.5		74.7	
Aroclor 1260	14	U	14	U	15	U
Total Metals (mg/Kg)						
Aluminum	23900		26900		24500	
Antimony	2.5	U	4.4	U	4.0	U
Arsenic	10.1		10.4		10.8	
Barium	166		190		156	
Beryllium	1.1		1.6		1.4	
Cadmium	0.63	U	1.1		1.0	U
Calcium	1450		15200		15800	
Chromium	22.1		29.5		25.8	
Cobalt	26.4		23.2		17.0	
Copper	32.2		21.6		20.4	
Iron	46400		27300		26900	
Lead	19.7		39.3		29.8	
Magnesium	1650		3680		3420	
Manganese	914		2360		1480	
Mercury	0.038	U	0.46		0.058	
Nickel	33.1		29.3		29.5	
Potassium	1320		1630		1740	
Selenium	2.5	U	4.4	UL	4.0	UL
Silver	0.63	U	0.54	U	0.51	U
Sodium	1300	U	1100	U	1000	U
Thallium	1.3	U	3.3	U	2.0	U
Vanadium	26.9		38.0		35.7	
Zinc	70.1		201		128	
					356	
						119

Qualifier Codes:

- U - This compound/analyte was not detected. The numerical value reported represents the sample detection limit for the compound/analyte.
- B - This result is qualitatively invalid because the compound/analyte was also detected in a blank at a similar concentration.
- J - This result should be considered a quantitative estimate.
- L - This positive result or detection limit should be considered a biased low quantitative estimate.
- N - The mass spectrum indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-12 02/01/10 Soil	SB-13 02/02/10 Soil	SB-14 02/02/10 Soil	SB-15 02/02/10 Soil
Volatile Organic Compounds (µg/Kg)				
Acetone	2.4	U	2.3	U
Benzene	0.36	U	0.36	U
Bromodichloromethane	0.27	U	0.27	U
Bromoform	0.16	U	0.16	U
Bromomethane	0.43	U	0.42	U
2-Butanone (MEK)	2.1	U	2.1	U
Carbon disulfide	0.32	U	0.57	J
Carbon tetrachloride	0.59	U	0.58	U
Chlorobenzene	0.36	U	0.35	U
Chloroethane	1.1	U	1.0	U
Chloroform	5.7		0.33	U
Chloromethane	0.17	U	0.17	U
Dibromochloromethane	0.12	U	0.11	U
1,1-Dichloroethane	0.15	U	0.14	U
1,2-Dichloroethane	0.36	U	0.36	U
1,1-Dichloroethene	0.70	U	0.69	U
cis-1,2-Dichloroethene	0.25	U	0.25	U
trans-1,2-Dichloroethene	0.47	U	0.47	U
1,2-Dichloroethene (total)	0.25	U	0.25	U
1,2-Dichloropropane	0.14	U	0.14	U
cis-1,3-Dichloropropene	0.14	U	0.14	U
trans-1,3-Dichloropropene	0.10	U	0.10	U
Ethylbenzene	0.39	U	0.39	U
2-Hexanone	1.0	U	1.0	U
4-Methyl-2-pentanone(MIBK)	0.86	U	0.85	U
Methylene chloride	0.24	U	0.23	U
Styrene	0.11	U	0.11	U
1,1,2,2-Tetrachloroethane	0.31	U	0.31	U
Tetrachloroethene	2.4	J	0.15	U
Toluene	0.31	U	0.31	U
1,1,1-Trichloroethane	0.14	U	0.13	U
1,1,2-Trichloroethane	0.20	U	0.19	U
Trichloroethene	16.0		0.55	U
Vinyl chloride	0.19	U	0.19	U
Xylene (total)	0.50	U	0.49	U
Tentatively Identified Volatile Organic Compounds (µg/Kg)				
Total Unknowns	None Detected	15	J	39
Total Alkanes		55	J	12
Total Substituted Aromatics		7.6	J	
Dichlorofluoromethane				
1,3,5-Trimethylbenzene				
1,2,4-Trimethylbenzene				

Soil and Sediment Samples
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Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-12 02/01/10 Soil	SB-13 02/02/10 Soil	SB-14 02/02/10 Soil	SB-15 02/02/10 Soil
Semivolatile Organic Compounds (µg/Kg)				
2-Chlorophenol	35 U	35 U	35 U	35 U
4-Chloro-3-methyl phenol	35 U	35 U	35 U	34 U
2,4-Dichlorophenol	56 U	56 U	56 U	55 U
2,4-Dimethylphenol	58 U	58 U	59 U	58 U
2,4-Dinitrophenol	42 U	42 U	43 U	42 U
4,6-Dinitro-o-cresol	42 U	42 U	43 U	42 U
2-Methylphenol	39 U	39 U	40 U	39 U
3&4-Methylphenol	44 U	44 U	44 U	44 U
2-Nitrophenol	37 U	37 U	37 U	36 U
4-Nitrophenol	59 U	59 U	59 U	58 U
Pentachlorophenol	59 U	59 U	60 U	59 U
Phenol	36 U	36 U	37 U	36 U
2,4,5-Trichlorophenol	40 U	40 U	41 U	40 U
2,4,6-Trichlorophenol	33 U	33 U	33 U	32 U
Acenaphthene	589	54.9	10 U	10 U
Acenaphthylene	79.3	11 U	11 U	11 U
Anthracene	1690	158	12 U	12 U
Benzo(a)anthracene	1330	148	11 U	11 U
Benzo(a)pyrene	1140	82.1	11 U	10 U
Benzo(b)fluoranthene	1150	208	12 U	11 U
Benzo(g,h,i)perylene	915	51.2	13 U	13 U
Benzo(k)fluoranthene	599	55.2	13 U	13 U
4-Bromophenyl phenyl ether	13 U	13 U	13 U	12 U
Butyl benzyl phthalate	20 U	20 U	20 U	20 U
2-Chloronaphthalene	11 U	11 U	11 U	11 U
4-Chloroaniline	11 U	11 U	11 U	11 U
Carbazole	568	16 U	16 U	16 U
Chrysene	1300	137	12 U	12 U
bis(2-Chloroethoxy)methane	14 U	14 U	14 U	14 U
bis(2-Chloroethyl)ether	10 U	10 U	11 U	10 U
bis(2-Chloroisopropyl)ether	10 U	10 U	10 U	10 U
4-Chlorophenyl phenyl ether	10 U	10 U	11 U	10 U
1,2-Dichlorobenzene	10 U	10 U	10 U	9.9 U
1,3-Dichlorobenzene	9.3 U	9.3 U	9.4 U	9.2 U
1,4-Dichlorobenzene	7.7 U	7.7 U	7.8 U	7.7 U
2,4-Dinitrotoluene	15 U	15 U	15 U	15 U
2,6-Dinitrotoluene	13 U	13 U	13 U	13 U
3,3'-Dichlorobenzidine	8.8 U	8.8 U	8.9 U	8.7 U
Dibenzo(a,h)anthracene	220	12 U	12 U	12 U
Dibenzofuran	468	10 U	10 U	10 U

Soil and Sediment Samples
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Nazareth, PA

SAMPLE LOCATION:	SB-12 02/01/10 Soil	SB-13 02/02/10 Soil	SB-14 02/02/10 Soil	SB-15 02/02/10 Soil
Semivolatile Organic Compounds (µg/Kg) (continued)				
Di-n-butyl phthalate	7.7	U	7.7	U
Di-n-octyl phthalate	17	U	17	U
Diethyl phthalate	12	U	12	U
Dimethyl phthalate	12	U	12	U
bis(2-Ethylhexyl)phthalate	71.7		171	
Fluoranthene	2290		390	
Fluorene	1050		90.2	
Hexachlorobenzene	11	U	11	U
Hexachlorobutadiene	9.6	U	9.6	U
Hexachlorocyclopentadiene	35	U	35	U
Hexachloroethane	9.6	U	9.6	U
Indeno(1,2,3-cd)pyrene	756		39.5	
Isophorone	9.3	U	9.3	U
2-Methylnaphthalene	47.9	J	19	U
2-Nitroaniline	15	U	15	U
3-Nitroaniline	14	U	14	U
4-Nitroaniline	14	U	14	U
Naphthalene	9.5	U	9.5	U
Nitrobenzene	10	U	10	U
N-Nitroso-di-n-propylamine	8.4	U	8.5	U
N-Nitrosodiphenylamine	21	U	21	U
Phenanthrene	3120		289	
Pyrene	2560		470	
1,2,4-Trichlorobenzene	9.2	U	9.2	U
Tentatively Identified Semivolatile Organic Compounds (µg/Kg)			None Detected	None Detected
Total Unknowns	3100	J	3600	J
Total Alkanes	630	J	18000	J
Total Substituted PAH	4200	J		
Total Substituted Phenols				
Total Alkenes				
Total Organic Acids				
Total Cycloalkanes			1800	J
1-Methyl naphthalene				
Cyclic octaatomic sulfur	620	JN		
Dibenzothiophene	200	JN		
9,10-Anthracenedione				

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	SB-12 02/01/10 Soil	SB-13 02/02/10 Soil	SB-14 02/02/10 Soil	SB-15 02/02/10 Soil
Polychlorinated Biphenyls (µg/Kg)				
Aroclor 1016	13	U	13	U
Aroclor 1221	24	U	24	U
Aroclor 1232	12	U	11	U
Aroclor 1242	13	U	13	U
Aroclor 1248	7.1	U	7.1	U
Aroclor 1254	9.0	U	9.0	U
Aroclor 1260	14	U	14	U
Total Metals (mg/Kg)				
Aluminum	29900		27200	
Antimony	2.5	U	2.4	U
Arsenic	6.1		11.5	
Barium	190		63.2	
Beryllium	2.3		1.3	
Cadmium	0.74		0.82	
Calcium	66400		2070	
Chromium	23.0		32.5	
Cobalt	8.4		16.8	
Copper	17.3		24.8	
Iron	21000		41700	
Lead	33.3		16.2	
Magnesium	17400		3610	
Manganese	1020		173	
Mercury	0.045		0.058	
Nickel	17.3		26.0	
Potassium	2320		1570	
Selenium	2.5	U	2.4	U
Silver	0.63	U	0.61	U
Sodium	1300	U	1200	U
Thallium	1.3	U	1.2	U
Vanadium	31.7		45.6	
Zinc	73.2		99.3	
			37.7	
			118	
				33.3 J
				82.5

Qualifier Codes:

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- J - This result should be considered a quantitative estimate.
- L - This positive result or detection limit should be considered a biased low quantitative estimate.
- N - The mass spectrum indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION: DATE COLLECTED: MATRIX:	MANHOLE 1 SED 02/02/10 Sediment	MANHOLE 1 DUP-SED 02/02/10 Sediment	MANHOLE 2 SED 02/02/10 Sediment	
Volatile Organic Compounds (µg/Kg)				
Acetone	5.1	U	15.0	J
Benzene	0.79	U	0.59	U
Bromodichloromethane	0.59	U	0.44	U
Bromoform	0.35	U	0.26	U
Bromomethane	0.93	U	0.70	U
2-Butanone (MEK)	4.5	U	3.4	U
Carbon disulfide	0.70	U	1.9	J
Carbon tetrachloride	1.3	U	0.96	U
Chlorobenzene	0.78	U	0.59	U
Chloroethane	2.3	U	1.7	U
Chloroform	0.73	U	0.55	U
Chloromethane	0.38	U	0.29	U
Dibromochloromethane	0.25	U	0.19	U
1,1-Dichloroethane	0.32	U	0.24	U
1,2-Dichloroethane	0.80	U	0.60	U
1,1-Dichloroethene	1.5	U	1.1	U
cis-1,2-Dichloroethene	0.55	U	0.41	U
trans-1,2-Dichloroethene	1.0	U	0.78	U
1,2-Dichloroethene (total)	0.55	U	0.41	U
1,2-Dichloropropane	0.30	U	0.22	U
cis-1,3-Dichloropropene	0.31	U	0.23	U
trans-1,3-Dichloropropene	0.22	U	0.17	U
Ethylbenzene	0.86	U	0.64	U
2-Hexanone	2.2	U	1.7	U
4-Methyl-2-pentanone(MIBK)	1.9	U	1.4	U
Methylene chloride	0.51	U	0.39	U
Styrene	0.25	U	0.19	U
1,1,2,2-Tetrachloroethane	0.68	U	0.51	U
Tetrachloroethene	0.69	J	0.50	J
Toluene	0.67	U	0.51	U
1,1,1-Trichloroethane	0.30	U	0.22	U
1,1,2-Trichloroethane	0.43	U	0.32	U
Trichloroethene	3.1	J	1.2	J
Vinyl chloride	0.41	U	0.31	U
Xylene (total)	1.1	U	0.81	U
Tentatively Identified				
Volatile Organic Compounds (µg/Kg)				
Total Unknowns	190	J	1400	J
Total Alkanes	270	J	2900	J
Total Substituted Aromatics				
Dichlorofluoromethane				
1,3,5-Trimethylbenzene				
1,2,4-Trimethylbenzene				

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION: DATE COLLECTED: MATRIX:	MANHOLE 1 SED 02/02/10 Sediment		MANHOLE 1 DUP-SED 02/02/10 Sediment		MANHOLE 2 SED 02/02/10 Sediment	
Semivolatile Organic Compounds (µg/Kg)						
2-Chlorophenol	64	U	56	U	360	U
4-Chloro-3-methyl phenol	63	U	55	U	360	U
2,4-Dichlorophenol	100	U	89	U	580	U
2,4-Dimethylphenol	110	U	93	U	600	U
2,4-Dinitrophenol	77	U	68	U	440	U
4,6-Dinitro-o-cresol	77	U	68	U	440	U
2-Methylphenol	72	U	63	U	410	U
3&4-Methylphenol	80	U	70	U	460	U
2-Nitrophenol	67	U	59	U	380	U
4-Nitrophenol	110	U	94	U	610	U
Pentachlorophenol	110	U	95	U	610	U
Phenol	66	U	58	U	380	U
2,4,5-Trichlorophenol	73	U	64	U	420	U
2,4,6-Trichlorophenol	59	U	52	U	340	U
Acenaphthene	669	J	419	J	100	U
Acenaphthylene	396	J	112	J	110	U
Anthracene	1090	J	711	J	218	J
Benzo(a)anthracene	1680	J	773	J	274	J
Benzo(a)pyrene	1760	J	701	J	328	J
Benzo(b)fluoranthene	1650	J	770	J	381	
Benzo(g,h,i)perylene	755	J	387	J	517	
Benzo(k)fluoranthene	1270	J	522	J	296	J
4-Bromophenyl phenyl ether	23	U	20	U	130	U
Butyl benzyl phthalate	138		111		3200	
2-Chloronaphthalene	20	U	17	U	110	U
4-Chloroaniline	20	U	18	U	110	U
Carbazole	297		151		170	U
Chrysene	2400	J	1290	J	472	
bis(2-Chloroethoxy)methane	25	U	22	U	150	U
bis(2-Chloroethyl)ether	19	U	17	U	110	U
bis(2-Chloroisopropyl)ether	19	U	16	U	110	U
4-Chlorophenyl phenyl ether	19	U	17	U	110	U
1,2-Dichlorobenzene	18	U	16	U	100	U
1,3-Dichlorobenzene	17	U	15	U	96	U
1,4-Dichlorobenzene	97.4	J	61.1	J	80	U
2,4-Dinitrotoluene	28	U	24	U	160	U
2,6-Dinitrotoluene	24	U	21	U	140	U
3,3'-Dichlorobenzidine	16	U	14	U	91	U
Dibenzo(a,h)anthracene	278		142		160	J
Dibenzofuran	473		315		110	U

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	MANHOLE 1 SED		MANHOLE 1 DUP-SED		MANHOLE 2 SED	
DATE COLLECTED:	02/02/10 Sediment		02/02/10 Sediment		02/02/10 Sediment	
MATRIX:						
Semivolatile Organic Compounds ($\mu\text{g}/\text{Kg}$) <i>(continued)</i>						
Di-n-butyl phthalate	101	J	106	J	80	U
Di-n-octyl phthalate	496		333		815	
Diethyl phthalate	21	U	19	U	120	U
Dimethyl phthalate	91.4	J	176		130	U
bis(2-Ethylhexyl)phthalate	16200	J	10200	J	7050	
Fluoranthene	3490	J	2160	J	405	
Fluorene	829	J	498	J	120	U
Hexachlorobenzene	21	U	18	U	120	U
Hexachlorobutadiene	18	U	15	U	100	U
Hexachlorocyclopentadiene	64	U	56	U	370	U
Hexachloroethane	18	U	15	U	100	U
Indeno(1,2,3-cd)pyrene	678	J	317	J	389	
Isophorone	17	U	15	U	97	U
2-Methylnaphthalene	144		122		200	U
2-Nitroaniline	28	U	24	U	160	U
3-Nitroaniline	25	U	22	U	140	U
4-Nitroaniline	25	U	22	U	140	U
Naphthalene	276		208		98	U
Nitrobenzene	18	U	16	U	100	U
N-Nitroso-di-n-propylamine	15	U	14	U	88	U
N-Nitrosodiphenylamine	38	U	33	U	210	U
Phenanthrene	3650		2530		422	
Pyrene	2390	J	1420	J	607	
1,2,4-Trichlorobenzene	17	U	15	U	96	U
Tentatively Identified Semivolatile Organic Compounds ($\mu\text{g}/\text{Kg}$)						
Total Unknowns	36000	J	40000	J	68000	J
Total Alkanes	93000	J	59000	J	4900	J
Total Substituted PAH	17000	J	7000	J		
Total Substituted Phenols						
Total Alkenes	14000	J	3600	J		
Total Organic Acids						
Total Cycloalkanes						
1-Methyl naphthalene	2500	JN				
Cyclic octaatomic sulfur						
Dibenzothiophene						
9,10-Anthracenedione						

Soil and Sediment Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	MANHOLE 1 SED		MANHOLE 1 DUP-SED		MANHOLE 2 SED	
DATE COLLECTED:	02/02/10 Sediment		02/02/10 Sediment		02/02/10 Sediment	
MATRIX:						
Polychlorinated Biphenyls (µg/Kg)						
Aroclor 1016	20	U	17	U	32	U
Aroclor 1221	37	U	32	U	59	U
Aroclor 1232	18	U	15	U	29	U
Aroclor 1242	20	U	17	U	32	U
Aroclor 1248	11	U	9.5	U	18	U
Aroclor 1254	700	J	301	J	2450	
Aroclor 1260	134		76.2		555	
Total Metals (mg/Kg)						
Aluminum	8990		10500		13700	
Antimony	5.3		2.7		2.1	UL
Arsenic	19.3		11.8		8.9	
Barium	461		329		471	
Beryllium	0.21	U	0.38		0.41	
Cadmium	34.0		25.3		17.1	
Calcium	75100		91700		87300	
Chromium	181		155		82.7	
Cobalt	24.9		19.5		15.7	
Copper	283		248		161	
Iron	87800		61400		36900	
Lead	317		265		130	
Magnesium	18800		24500		23900	
Manganese	1380		1410		663	
Mercury	0.19		0.24		0.31	
Nickel	53.8		46.7		37.4	
Potassium	1610		2240		1830	
Selenium	4.1	U	3.9	U	2.1	U
Silver	0.88		0.70		1.4	
Sodium	1000	U	970	U	1000	U
Thallium	2.1	U	1.9	U	2.1	U
Vanadium	295	J	176	J	28.7	J
Zinc	1440		1120		931	

Qualifier Codes:

- U - This compound/analyte was not detected. The numerical value reported represents the sample detection limit for the compound/analyte.
- B - This result is qualitatively invalid because the compound/analyte was also detected in a blank at a similar concentration.
- J - This result should be considered a quantitative estimate.
- L - This positive result or detection limit should be considered a biased low quantitative estimate.
- N - The mass spectrum indicates the presence of a compound for which there is presumptive evidence to make a tentative identification.

Aqueous Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION: DATE COLLECTED: MATRIX:	WW TANK 02/02/10 Aqueous	EQUIP BLANK 02/01/10 Aqueous	TRIP BLANK 01/29/10 Aqueous	TRIP BLANK 02/02/10 Aqueous	TRIP BLANK 02/02/10 Aqueous	
Volatile Organic Compounds (µg/L)						
Acetone	2.9	U	2.9	U	2.9	U
Benzene	0.23	U	0.23	U	0.23	U
Bromodichloromethane	0.22	U	0.22	U	0.22	U
Bromoform	0.23	U	0.23	U	0.23	U
Bromomethane	0.30	U	0.30	U	0.30	U
2-Butanone (MEK)	1.6	U	1.6	U	1.6	U
Carbon disulfide	0.74	U	0.74	U	0.74	U
Carbon tetrachloride	0.26	U	0.26	U	0.26	U
Chlorobenzene	0.39	U	0.39	U	0.39	U
Chloroethane	0.37	U	0.37	U	0.37	U
Chloroform	0.23	U	0.23	U	0.23	U
Chloromethane	0.29	U	0.29	U	0.29	U
Dibromochloromethane	0.22	U	0.22	U	0.22	U
1,1-Dichloroethane	0.29	U	0.29	U	0.29	U
1,2-Dichloroethane	0.33	U	0.33	U	0.33	U
1,1-Dichloroethene	0.40	U	0.40	U	0.40	U
cis-1,2-Dichloroethene	0.22	U	0.22	U	0.22	U
trans-1,2-Dichloroethene	0.25	U	0.25	U	0.25	U
1,2-Dichloroethene (total)	0.22	U	0.22	U	0.22	U
1,2-Dichloropropane	0.27	U	0.27	U	0.27	U
cis-1,3-Dichloropropene	0.25	U	0.25	U	0.25	U
trans-1,3-Dichloropropene	0.21	U	0.21	U	0.21	U
Ethylbenzene	0.27	U	0.27	U	0.27	U
2-Hexanone	1.4	U	1.4	U	1.4	U
4-Methyl-2-pentanone(MIBK)	0.86	U	0.86	U	0.86	U
Methylene chloride	0.30	U	0.30	U	0.30	U
Styrene	0.58	U	0.58	U	0.58	U
1,1,2,2-Tetrachloroethane	0.24	U	0.24	U	0.24	U
Tetrachloroethene	0.27	U	0.27	U	0.27	U
Toluene	0.30	U	0.30	U	0.30	U
1,1,1-Trichloroethane	0.26	U	0.26	U	0.26	U
1,1,2-Trichloroethane	0.23	U	0.23	U	0.23	U
Trichloroethene	0.24	U	0.24	U	0.24	U
Vinyl chloride	0.44	U	0.44	U	0.44	U
Xylene (total)	0.25	U	0.25	U	0.25	U
Tentatively Identified Volatile Organic Compounds (µg/L)	None Detected	None Detected	None Detected	None Detected	None Detected	

Aqueous Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	WW TANK 02/02/10 Aqueous	EQUIP BLANK 02/01/10 Aqueous	TRIP BLANK 01/29/10 Aqueous	TRIP BLANK 02/02/10 Aqueous	TRIP BLANK 02/02/10 Aqueous
Semivolatile Organic Compounds (µg/L)					
2-Chlorophenol	1.1	U	1.1	U	Not Analyzed
4-Chloro-3-methyl phenol	1.1	U	1.1	U	Not Analyzed
2,4-Dichlorophenol	1.3	U	1.2	U	Not Analyzed
2,4-Dimethylphenol	1.7	U	1.7	U	Not Analyzed
2,4-Dinitrophenol	0.78	U	0.74	U	
4,6-Dinitro-o-cresol	0.54	U	0.51	U	
2-Methylphenol	1.2	U	1.1	U	
3&4-Methylphenol	1.1	U	1.0	U	
2-Nitrophenol	1.3	U	1.2	U	
4-Nitrophenol	0.87	U	0.83	U	
Pentachlorophenol	0.84	U	0.80	U	
Phenol	0.61	U	0.58	U	
2,4,5-Trichlorophenol	1.4	U	1.3	U	
2,4,6-Trichlorophenol	1.3	U	1.2	U	
Acenaphthene	0.39	U	0.37	U	
Acenaphthylene	0.29	U	0.27	U	
Anthracene	0.17	U	0.16	U	
Benzo(a)anthracene	0.13	U	0.12	U	
Benzo(a)pyrene	0.10	U	0.095	U	
Benzo(b)fluoranthene	0.26	U	0.25	U	
Benzo(g,h,i)perylene	0.13	U	0.12	U	
Benzo(k)fluoranthene	0.40	U	0.38	U	
4-Bromophenyl phenyl ether	0.37	U	0.35	U	
Butyl benzyl phthalate	0.26	U	0.25	U	
2-Chloronaphthalene	0.44	U	0.42	U	
4-Chloroaniline	0.27	U	0.25	U	
Carbazole	0.17	U	0.17	U	
Chrysene	0.11	U	0.11	U	
bis(2-Chloroethoxy)methane	0.26	U	0.25	U	
bis(2-Chloroethyl)ether	0.33	U	0.31	U	
bis(2-Chloroisopropyl)ether	0.41	U	0.39	U	
4-Chlorophenyl phenyl ether	0.37	U	0.35	U	

Aqueous Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

SAMPLE LOCATION:	WW TANK 02/02/10 Aqueous	EQUIP BLANK 02/01/10 Aqueous	TRIP BLANK 01/29/10 Aqueous	TRIP BLANK 02/02/10 Aqueous	TRIP BLANK 02/02/10 Aqueous
Semivolatile Organic Compounds (µg/L) (continued)			Not Analyzed	Not Analyzed	Not Analyzed
1,2-Dichlorobenzene	0.44	U	0.42	U	
1,3-Dichlorobenzene	0.38	U	0.36	U	
1,4-Dichlorobenzene	0.41	U	0.39	U	
2,4-Dinitrotoluene	0.23	U	0.22	U	
2,6-Dinitrotoluene	0.34	U	0.33	U	
3,3'-Dichlorobenzidine	0.31	U	0.30	U	
Dibenzo(a,h)anthracene	0.16	U	0.15	U	
Dibenzofuran	0.32	U	0.30	U	
Di-n-butyl phthalate	0.20	U	0.19	U	
Di-n-octyl phthalate	0.42	U	0.40	U	
Diethyl phthalate	0.17	U	0.17	U	
Dimethyl phthalate	0.24	U	0.23	U	
bis(2-Ethylhexyl)phthalate	1.2	J	0.33	U	
Fluoranthene	0.18	U	0.17	U	
Fluorene	0.28	U	0.27	U	
Hexachlorobenzene	0.39	U	0.37	U	
Hexachlorobutadiene	0.39	U	0.37	U	
Hexachlorocyclopentadiene	0.71	U	0.67	U	
Hexachloroethane	0.28	U	0.26	U	
Indeno(1,2,3-cd)pyrene	0.14	U	0.13	U	
Isophorone	0.26	U	0.25	U	
2-Methylnaphthalene	0.69	U	0.66	U	
2-Nitroaniline	0.25	U	0.24	U	
3-Nitroaniline	0.30	U	0.29	U	
4-Nitroaniline	0.19	U	0.18	U	
Naphthalene	0.45	U	3.7		
Nitrobenzene	0.27	U	0.25	U	
N-Nitroso-di-n-propylamine	0.46	U	0.44	U	
N-Nitrosodiphenylamine	0.23	U	0.22	U	
Phenanthrene	0.22	U	0.21	U	
Pyrene	0.16	U	0.16	U	
1,2,4-Trichlorobenzene	0.46	U	0.44	U	
Tentatively Identified Semivolatile Organic Compounds (µg/L)	None Detected	None Detected	Not Analyzed	Not Analyzed	Not Analyzed

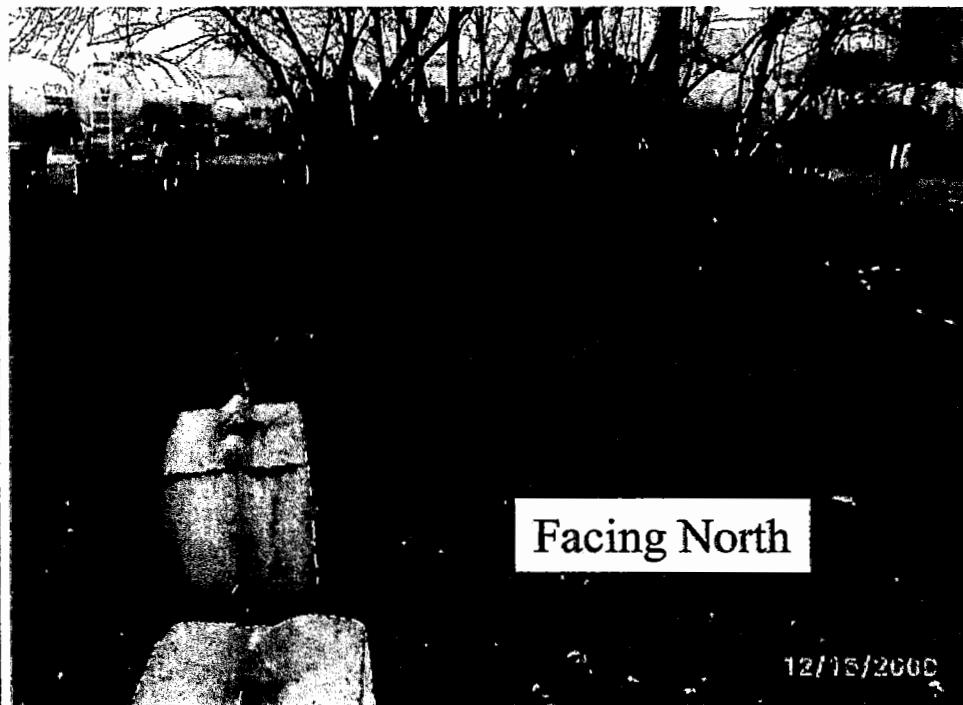
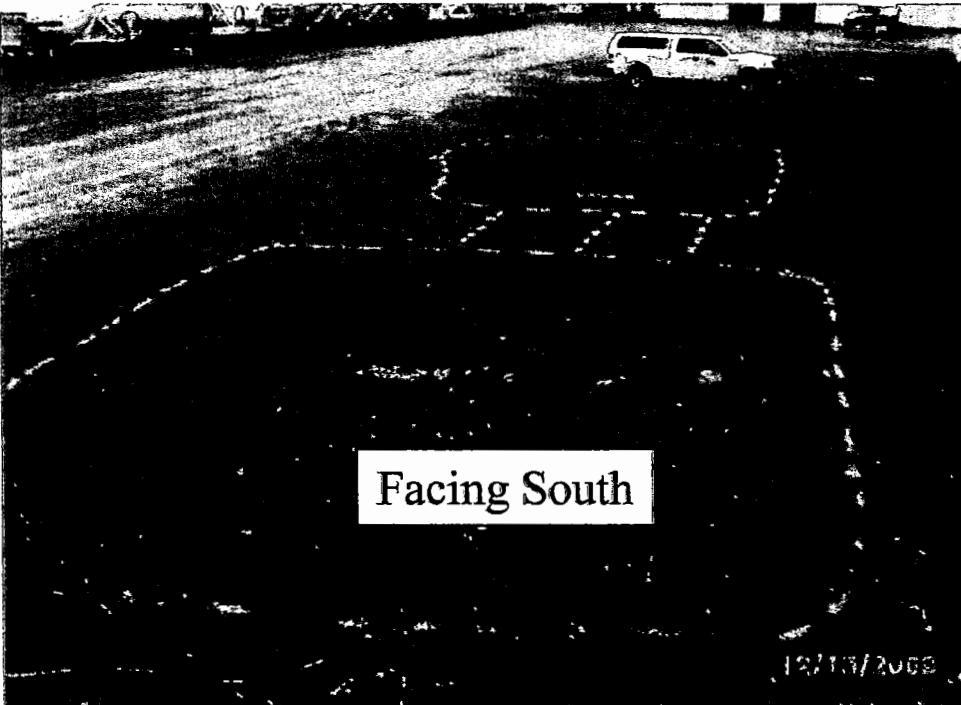
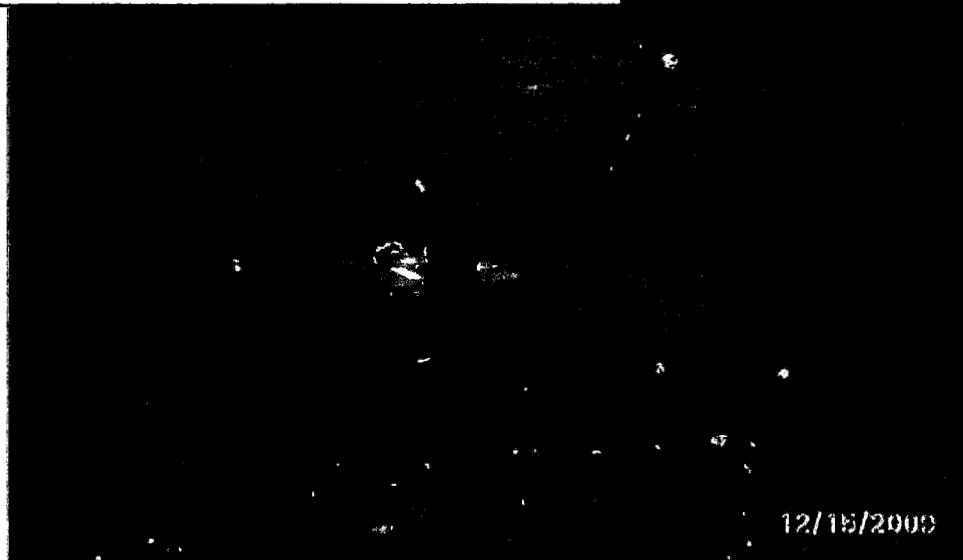
Aqueous Samples
Analytical Results
Venezia - Nazareth Trucking Terminal
Nazareth, PA

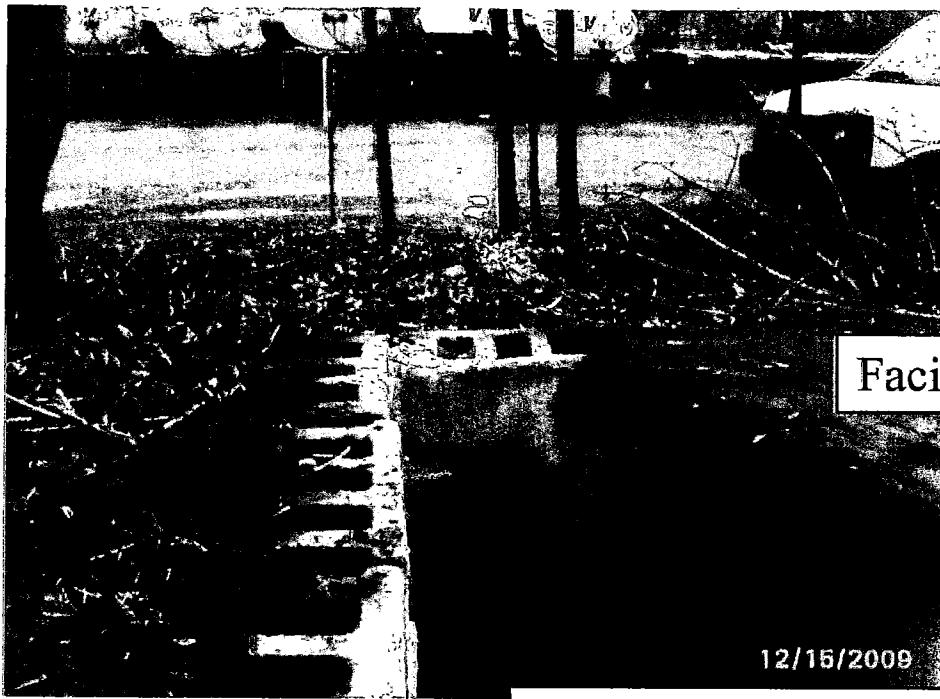
SAMPLE LOCATION:	WW TANK 02/02/10 Aqueous	EQUIP BLANK 02/01/10 Aqueous	TRIP BLANK 01/29/10 Aqueous	TRIP BLANK 02/02/10 Aqueous	TRIP BLANK 02/02/10 Aqueous
Polychlorinated Biphenyls (µg/L)					
Aroclor 1016	0.30	U	0.60	U	Not Analyzed
Aroclor 1221	0.41	U	0.82	U	
Aroclor 1232	0.31	U	0.62	U	
Aroclor 1242	0.27	U	0.54	U	
Aroclor 1248	0.28	U	0.56	U	
Aroclor 1254	0.18	U	0.36	U	
Aroclor 1260	0.14	U	0.28	U	
Total Metals (µg/L)					
Aluminum	200	U	200	U	Not Analyzed
Antimony	6.0	U	6.0	U	
Arsenic	3.0	U	3.0	U	
Barium	200	U	200	U	
Beryllium	1.0	U	1.0	U	
Cadmium	3.0	U	3.0	U	
Calcium	93400		5000	U	
Chromium	10	U	10	U	
Cobalt	50	U	50	U	
Copper	10	U	10	U	
Iron	229		100	U	
Lead	3.0	L	3.0	U	
Magnesium	8500		5000	U	
Manganese	114		15	U	
Mercury	0.20	UL	0.20	U	
Nickel	10	U	10	U	
Potassium	15200		10000	U	
Selenium	10	UL	10	U	
Silver	10	U	10	U	
Sodium	10400		10000	U	
Thallium	2.0	UL	10	U	
Vanadium	50	U	50	U	
Zinc	20	U	20	U	

Qualifier Codes:

- U - This compound/analyte was not detected. The numerical value reported represents the sample detection limit for the compound/analyte.
- J - This result should be considered a quantitative estimate.
- L - This positive result or detection limit should be considered a biased low quantitative estimate.

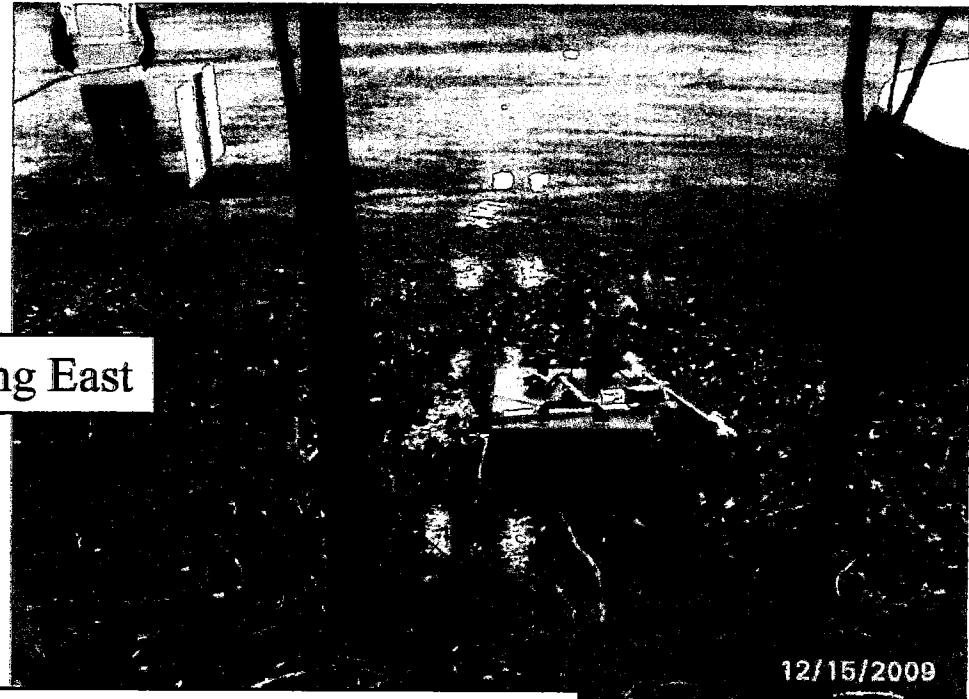
Geo-Graf GPR Findings: Lagoon Perimeters and Electric





Facing East

12/15/2009



12/15/2009

Confirmation of two, parallel pipes running from
dirt mound/vault into concrete holding tank



12/15/2009



Facing West

12/15/2009

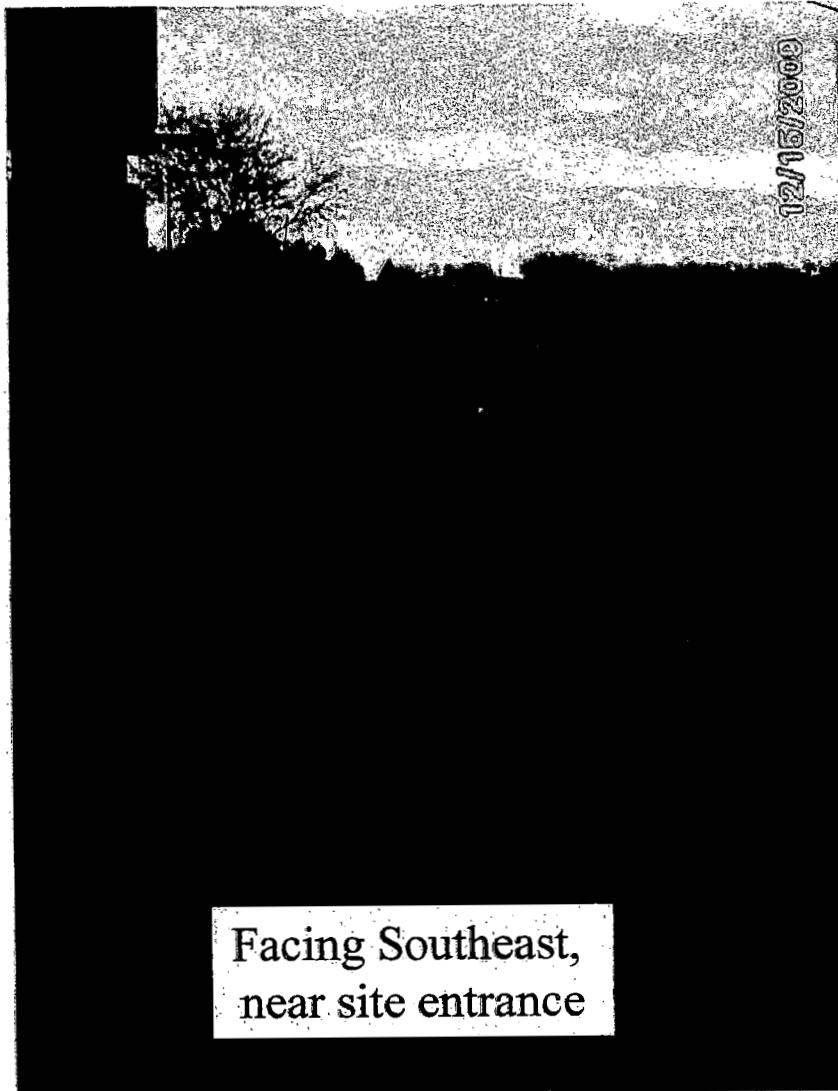
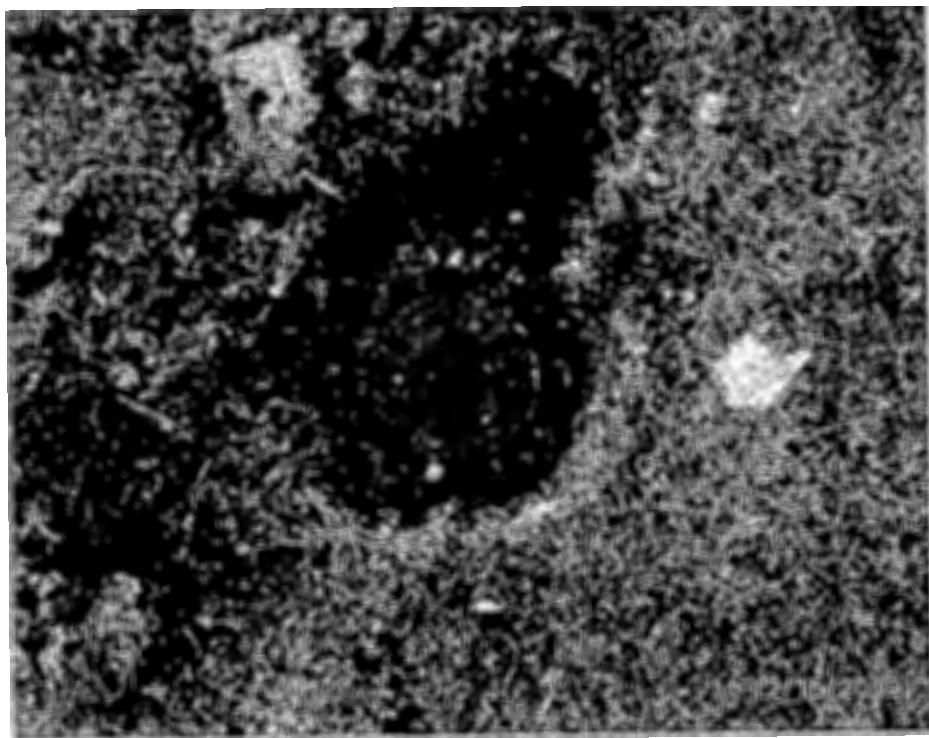


Confirmation of piping leading from former truck washing bay to concrete holding tank

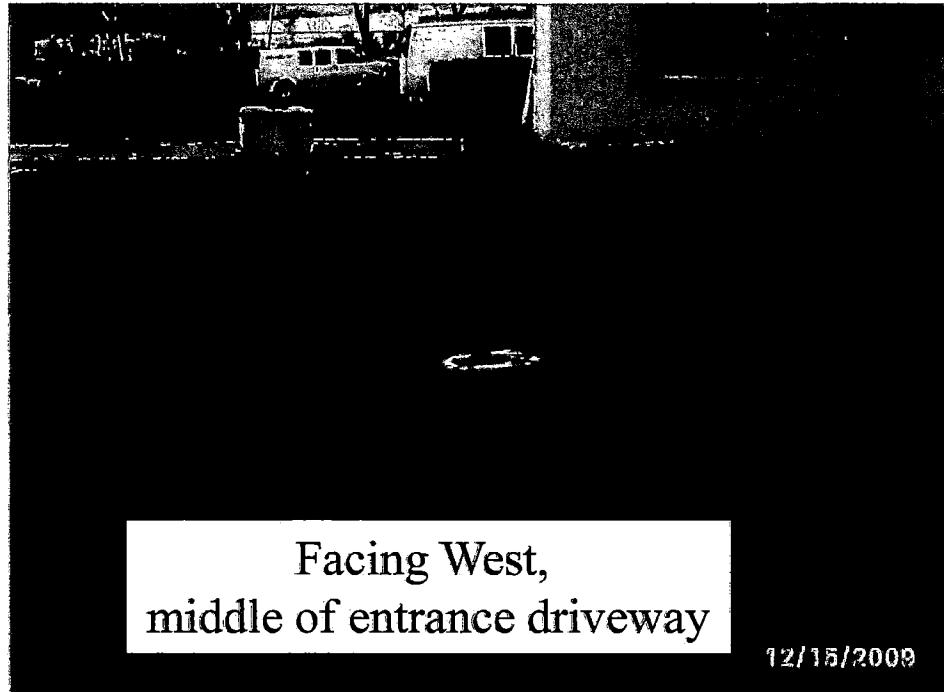
Facing Northwest



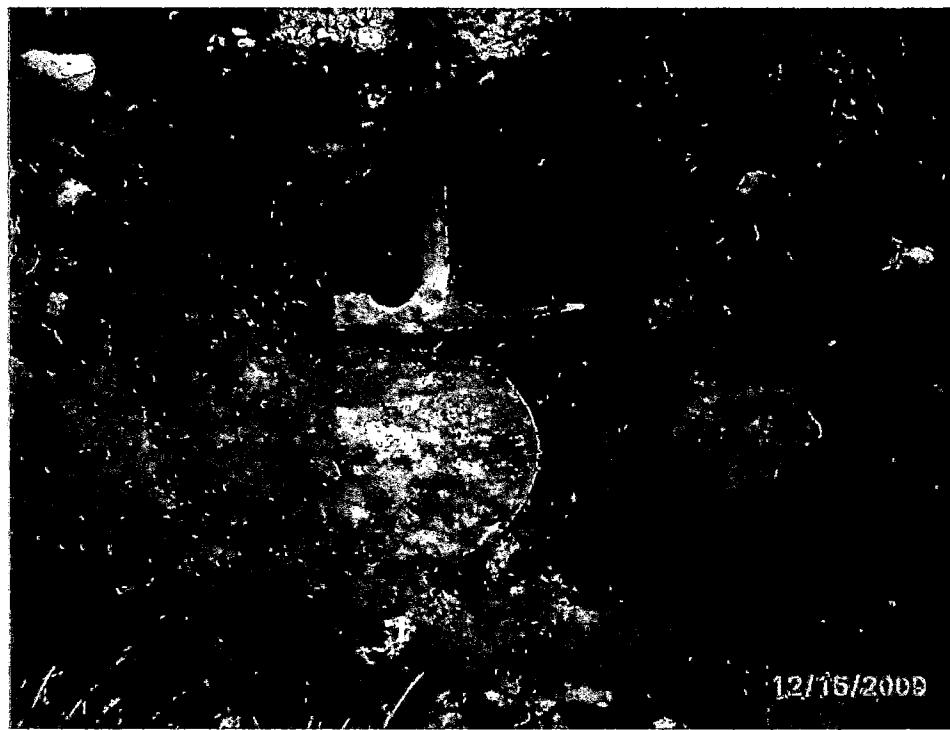
Location of missing MW-1



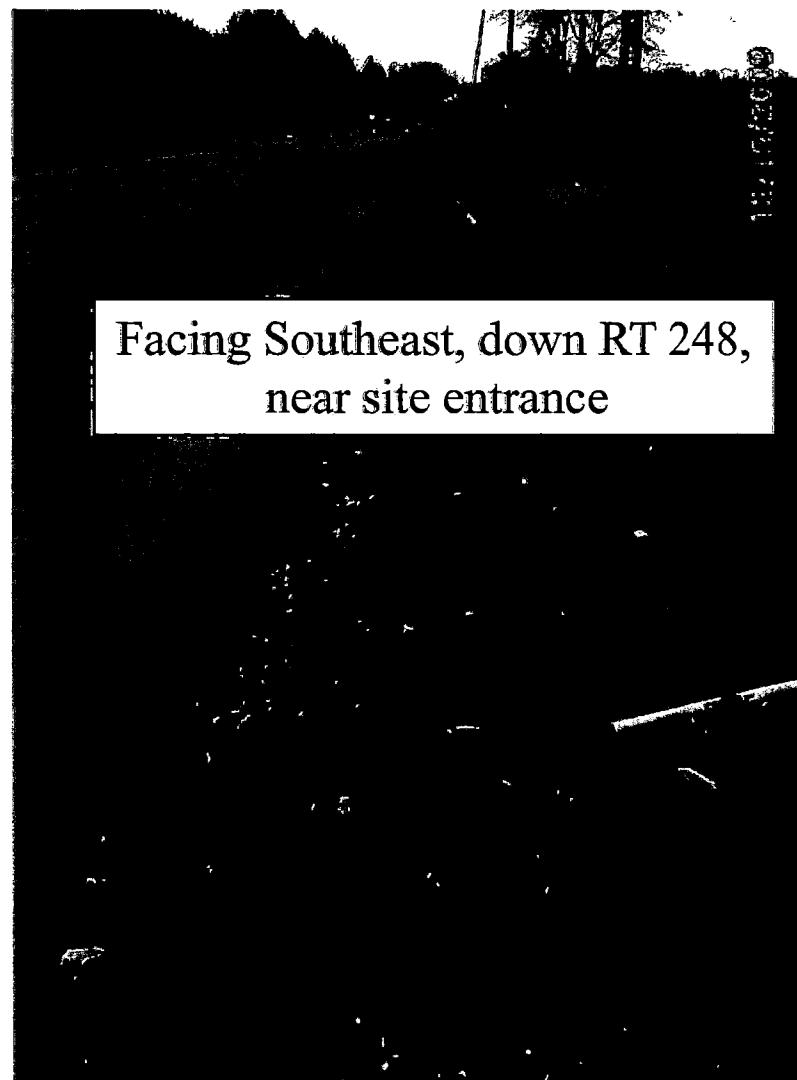
Location of missing MW-2



Location of missing MW-3 (abandoned)



Facing Southeast, down RT 248,
near site entrance

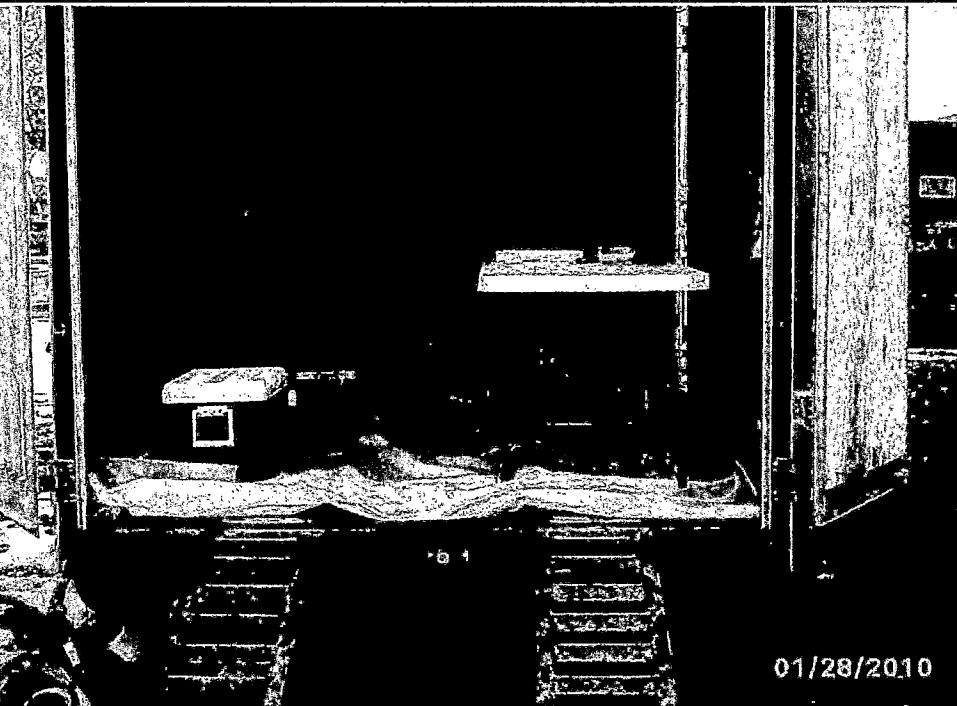




EDN Soil Investigation,
Initial staging area near former lagoons

01/28/2010

01/28/2010



01/28/2010



02/01/2010

Various Soil Boring Locations

SB-7

02/01/2010

SB-9

02/01/2010

SB-11

02/01/2010

SB-15

02/02/2010